

CLAIMS

What is claimed is:

1. A connection device for connecting a spinal fastener to an elongated member comprising:

5 a body having a first end, a second end, a first channel, a second channel, and a third channel, said body having a portion that tapers outwardly towards said second end;

a washer slidably mountable over said body, said washer having a groove and an inner surface, wherein said inner surface has a diameter smaller than a diameter of the tapered portion of said body;

10 an offsetting member slidable over said first end; wherein said offsetting member contacts said spinal fastener in at least two locations; and

a fixation member insertable in said third channel, wherein the fixation member applies a compressive force preventing relative motion between the spinal fastener and the elongated member.

15 2. The connection device as described in claim 1, wherein said offsetting member has a ring shape.

3. The connection device as described in claim 2, wherein said offsetting member includes
20 at least two differing inner diameters.

4. The connection device as described in claim 3, wherein said offsetting member is composed of a shape memory alloy.

5. The connection device as described in claim 4, wherein said offsetting member further includes at least one groove.

6. The connection device as described in claim 1, wherein said fixation member is a set screw, and said aperture is threaded and intersects said first channel.

7. The connection device as described in claim 6, wherein said threaded aperture is arranged at an angle relative to a line between said first channel and said second channel.

8. The connection device as described in claim 1, wherein said fastener is a spinal screw.

9. The connection device as described in claim 1, wherein said fastener is a Schanz-type screw.

10. A method, comprising:
connecting an elongated member to a connection member, said connection member having a first channel and a second channel, so that at least part of said elongated member occupies at least part of said first channel;

sliding an offsetting member over said connection device so that at least a part of said offsetting member is between at least a part of said first channel and at least a part of said second channel;

connecting a bone fixation member to said connection member so that at least part of said bone fixation member occupies at least part of said second channel; and

applying compressive force to said elongated member, said offsetting member, and said spinal fastener,

5 wherein said offsetting member contacts said elongated member and said spinal fastener in at least two differing locations

11. The method of claim 9, wherein said offsetting member has a ring shape.

10 12. The method of claim 9, wherein said offsetting member further includes at least two differing inner diameters.

13. The method of claim 9, wherein said offsetting member is composed of a shape memory alloy.

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14. The method of claim 9, wherein said offsetting member further includes at least one groove.

15. A method, comprising: /

20 providing a body having a first end, a second end, a first channel, a second channel, and an aperture, wherein a portion of said body tapers outwardly;

sliding a washer over said body;

passing a fastener through said body via said first channel; and

sliding an offsetting member over said body, wherein said offsetting member engages
said fastener in at least two locations;

placing said body over said elongated member via said second channel; and

5 inserting a locking member into said aperture thereby locking said fastener with respect
to said elongated member.

16. The method of claim 15, wherein said offsetting member has a ring shape.

10 17. The method of claim 15, wherein said offsetting member further includes at least two
differing inner diameters.

18. The method of claim 15, wherein said offsetting member is composed of a shape memory
alloy.

15 19. The method of claim 15, wherein said offsetting member further includes at least one
groove.

20 20. The method of claim 15, wherein said locking member is a set screw, and said aperture is
threaded bore and intersects said first channel.

21. The method of claim 20, wherein said threaded bore is arranged at an angle relative to a line between said first channel and said second channel.

22. An apparatus, comprising:

5 a body member having a first channel and a second channel;

an elongated member at least partially within said first channel;

a bone fixation member at least partially within said second channel;

an offsetting member slidably connected to said body member and positioned between said elongated member and said bone fixation member; and

10 a washer having a groove, said washer connected to said body so that said groove accommodates at least a portion of said bone fixation member.

23. The apparatus of claim 22, wherein said offsetting member has a ring shape.

15 24. The apparatus of claim 22, wherein said offsetting member further includes at least two differing inner diameters.

25. The apparatus of claim 22, wherein said offsetting member is composed of a shape memory alloy.

20 26. The apparatus of claim 22, wherein said offsetting member further includes at least one groove.

27. The apparatus of claim 22, further comprising a locking member connected to said body.

28. The apparatus of claim 27, wherein said locking member is a set screw.

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29. The apparatus of claim 28, wherein said body includes a threaded aperture enabling connection of said body to said locking member, said threaded aperture being arranged at an angle relative to a line between said first channel and said second channel.

10 30. The apparatus of claim 22, wherein said elongated member is a spinal rod.

31. The apparatus of claim 22, wherein said bone fixation member includes a threaded member.

15 32. The apparatus of claim 22, wherein said bone fixation member includes a hook.

33. The apparatus of claim 22, wherein said bone fixation member includes a clamp.

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